

REMARKS

The sole basis for rejection is applied to all claims under 35 U.S.C. § 103. The Office asserts the claims are unpatentable over Morris (5,173,434) in view of Lakowicz (*Principles of Fluorescent Spectroscopy*).

The discussion of Lakowicz in the bridging paragraph on pages 3-4 of the Office action is not disputed, and applicant is appreciative that the distinction between collisional quenching (which requires physical contact of the fluorophore with the quencher) and quenching that occurs at a distance (and does not require physical contact of the fluorophore with the quencher) is recognized by the Office.

It is not clear to applicant, however, that Lakowicz or any other cited document states that collisional quenching achieves greater sensitivity and specificity and has a greater quenching effect than absorbents related to concentration as the Office asserts. But even if that is true, the rejection is grounded in the idea that the collisional quenching required by the claim and described by Lakowicz could somehow be employed in the methods described by Morris. It cannot.

This should be apparent from figures 1 and 2 of Morris. The fluorophore employed in Morris is always embedded in a fluorescent matrix, and cannot contact any collisional quencher. Therefore, one cannot ascertain the concentration of the analyte in the assay solution shown in Morris which extends far beyond the surface of the matrix containing the fluorophore using collisional quenching.

In figure 1A, the matrix is backed by a reflective white surface which permits the light emitted from the fluorophore to proceed through the length of the solution, thus determining the concentration of the quencher which is generated by the analyte contained therein. In figure 1B,

the excitation is supplied from the opposite side of the fluorescent matrix, and thus the emission proceeds through the solution both directly and at 90°. In figure 2, the excitation light itself is what is absorbed by the analyte; the fluorescence emission is not affected. Thus, fluorescence quenching does not occur at all; the excitation wavelengths are not molecules, but just light.

Thus, even if it were true that collisional quenching were, somehow, advantageous over absorption quenching, there is no way that the Morris assay could be redesigned to accommodate collisional quenching as the determinant.

Since the combination of Morris with Lakowicz cannot result in, or suggest the invention as claimed, applicant respectfully requests that this rejection be withdrawn and claims 1, 13 and 15 be passed to issue.

If minor issues remain that could be resolved by phone, a call to the undersigned would be greatly appreciated.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket No. 527832000420.

Respectfully submitted,

Dated: February 6, 2009

By: / Kate H. Murashige /
Kate H. Murashige
Registration No. 29,959
MORRISON & FOERSTER LLP
12531 High Bluff Drive, Suite 100
San Diego, California 92130-2040
Telephone: (858) 720-5112
Facsimile: (858) 720-5125